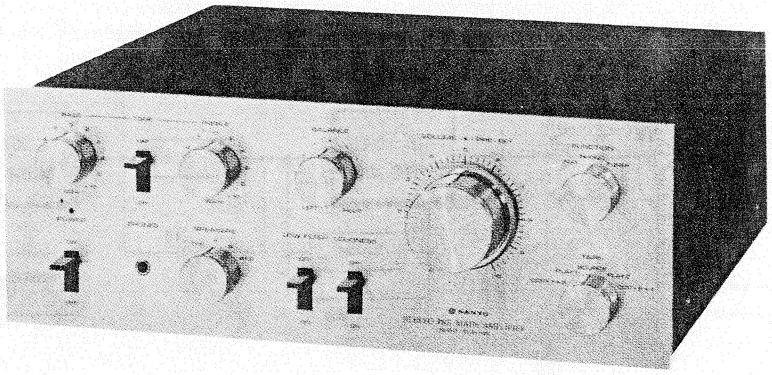
SANYO

SANYO
STEREO AMPLIFIER
DCA 1001
SERVICE MANUAL



SPECIFICATIONS

POWER AMPLIFIER SECTION

IHF Music Power Output (at 8 ohms)	70 W
Continuous Power Output (at 8 ohms)	
Both Channel Driven at 1 kHz	50 W
Both Channel Driven at 20Hz to 20kHz	45 W
Total Harmonic Distortion (at AUX input ±1 dB)	0.5 %
Power Bandwidth	10Hz - 35kHz
Frequency Response (at AUX input ±1 dB)	15Hz - 25kHz
Signal to Noise Ratio	
AUX	90 dB
PHONO	70 dB
TAPE	70 dB
Damping Factor	40

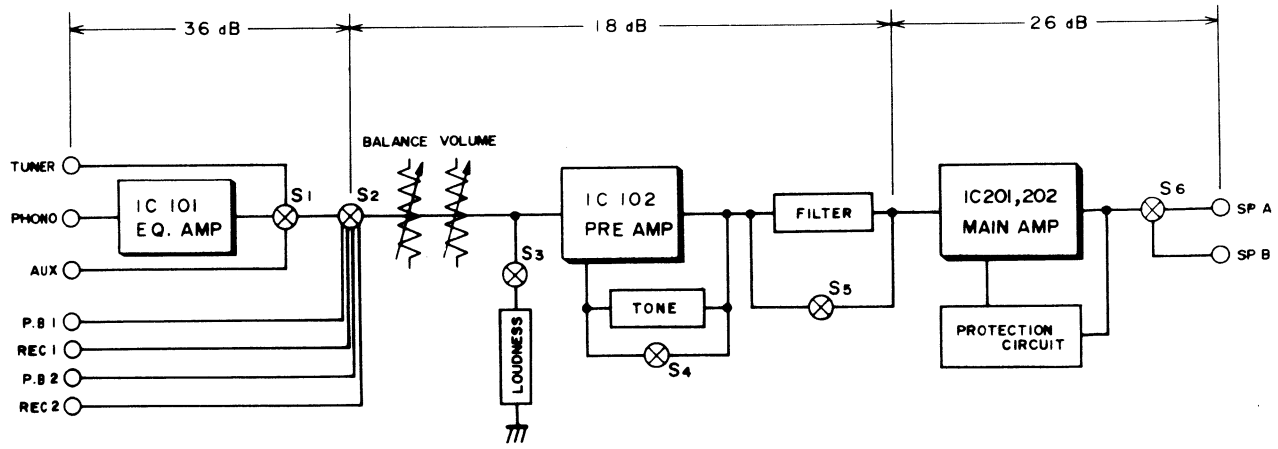
GENERAL SECTION

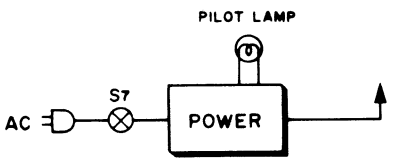
Power Source (Switchable)	
Voltage	AC:110/120/220/240V
Frequency	50/60 Hz
Power Consumption	65 W
Dimensions	400(W)x350(D)x148(H)mm
Weight	9.8 kg

PRE AMPLIFIER SECTION

Input Sensitivity/Impedance	
AUX	140mV/50k ohms
TAPE	140mV/50k ohms
PHONO	2.5mV/50k ohms
TAPE REC. Output Level	140 mV
Tone Control	
Bass (at 50Hz)	±10 dB
Treble (at 20kHz)	±10 dB
Loudness Control (at −30dB position)	
at 100 Hz	+8 dB
at 10 kHz	+3 dB
Low Filter (at 70Hz)	6 dB/oct.

PRE MAIN AMP BLOCK DIAGRAM





S1, FUNCTION SW.
S2, TAPE SW.
S3, LOUDNESS SW.
S4, TONE DEFEET SW.
S5, LOW FILTER SW.
S6, SPEAKER SW.
S7 POWER SW.

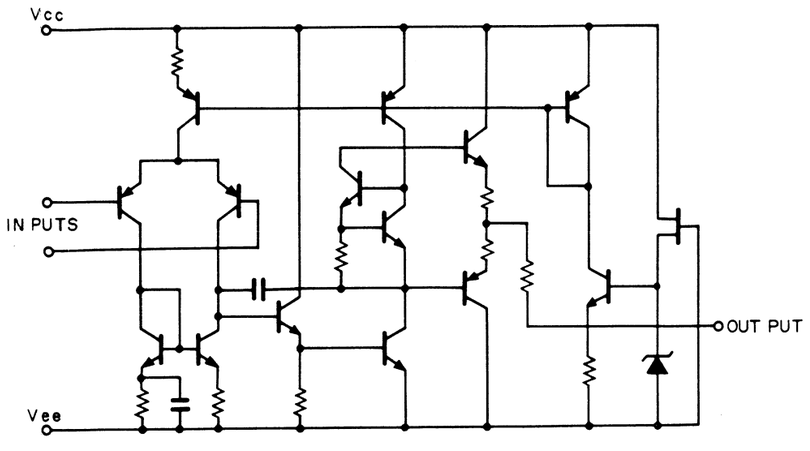
PARTS LIST

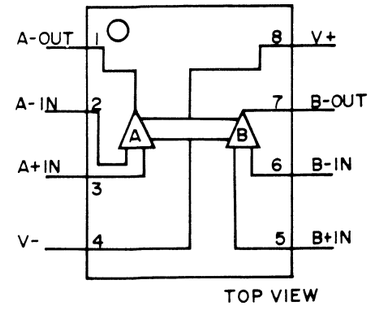
Key No.	Part No.	Description	Q'ty
	EQ AMP TONE SW PC ASSY		
33	131 0 4001 70300	EQ Amp Tone SW PC Assy	1
	4 2229 25070	Variable Resistor	1
	4 2229 25080	Variable Resistor	2
	4 2319 24401	SW Lever 12P	1
	CAPACITORS		
C01,02	C1ETRM475A	Tantal 4.7μF 25V ±20%	2
C03,04	C1ARB-336A	Electrolytic 33μF 10V	2
C05,06	C1HFAJ183A	Mylar 0.018μF 50V ±5%	2
C07,08	C1HFAJ472A	Mylar 0.0047 F 50V ±5%	2
C09,10	C1HFAK224A	Mylar 0.22μF 50V ±10%	2
C11,12	C1HCSK201SL	Ceramic 200pF 50V ±10%	2
C13,14	C1HFAK103A	Mylar 0.01μF 50V ±10%	2
C15,16	C1HRB-105A	Electrolytic 1μF 50V	2
C17,18	C1HRE-105A	Electrolytic 1μF 50V	2
C19,20	C1HFAK124A	Mylar 0.12μF 50V±10%	2
C21,22	C1HFAK223A	Mylar 0.022μF 50V±10%	2
C23,24	C1HFAK393A	Mylar 0.039μF 50V±10%	2
C25,26	C1HFAK332A	Mylar 0.0033μF 50V ±10%	2
C27,28	C1HCSK251SL	Ceramic 250pF 50V ±10%	2
C29,30	C1HRB-105A	Electrolytic 1μF 50V	2
C31,32	C1HFAK683A	Mylar 0.068μF 50V ±10%	2
C33,34	C1ERB-337A	Electrolytic 330μF 25V	2

Key No.	Part No.	Description	Q'ty
	SEMICONDUCTORS		
D01,02	DGG-1N4001	Diode 1N4001 GI	2
IC01	IJJ-NJM4558D-D	NJM4558D-D EQ Amp	1
IC02	IJJ-NJM4558D-E	NJM4558D-E Tone Amp	1
	RESISTORS		
R01,02	R2EDSJ152A	Carbon 1.5k 1/4W ±5%	2
R03,04 05,06	R2EDSJ104A	Carbon 100k 1/4W ±5%	4
R07,08	R2EDSJ331A	Carbon 330 1/4W ±5%	2
R09,10	R2EDSJ274A	Carbon 270k 1/4W ±5%	2
R11,12	R2EDSJ153A	Carbon 15k 1/4W ±5%	2
R13,14	R2EDSJ273A	Carbon 27k 1/4W ±5%	2
R15,16 17,18	R2EDSJ474A	Carbon 470k 1/4W ±5%	4
R19,20	R2EDSJ822A	Carbon 8.2k 1/4W ±5%	2
R21,22	R2EDSJ122A	Carbon 1.2k 1/4W ±5%	2
R23,24	R2EDSJ471A	Carbon 470 1/4W ±5%	2
R25,26	R2EDSJ393A	Carbon 39k 1/4W ±5%	2
R27,28	R2EDSJ152A	Carbon 1.5k 1/4W ±5%	2
R29,30	R2EDSJ182A	Carbon 1.8k 1/4W ±5%	2
R31,32	R2EDSJ123A	Carbon 12k 1/4W ±5%	2
R33,34	R2EDSJ681A	Carbon 680 1/4W ±5%	2
R35,36	R2EDSJ122A	Carbon 1.2k 1/4W ±5%	2
R37,38	R2EDSJ474A	Carbon 470k 1/4W ±5%	2

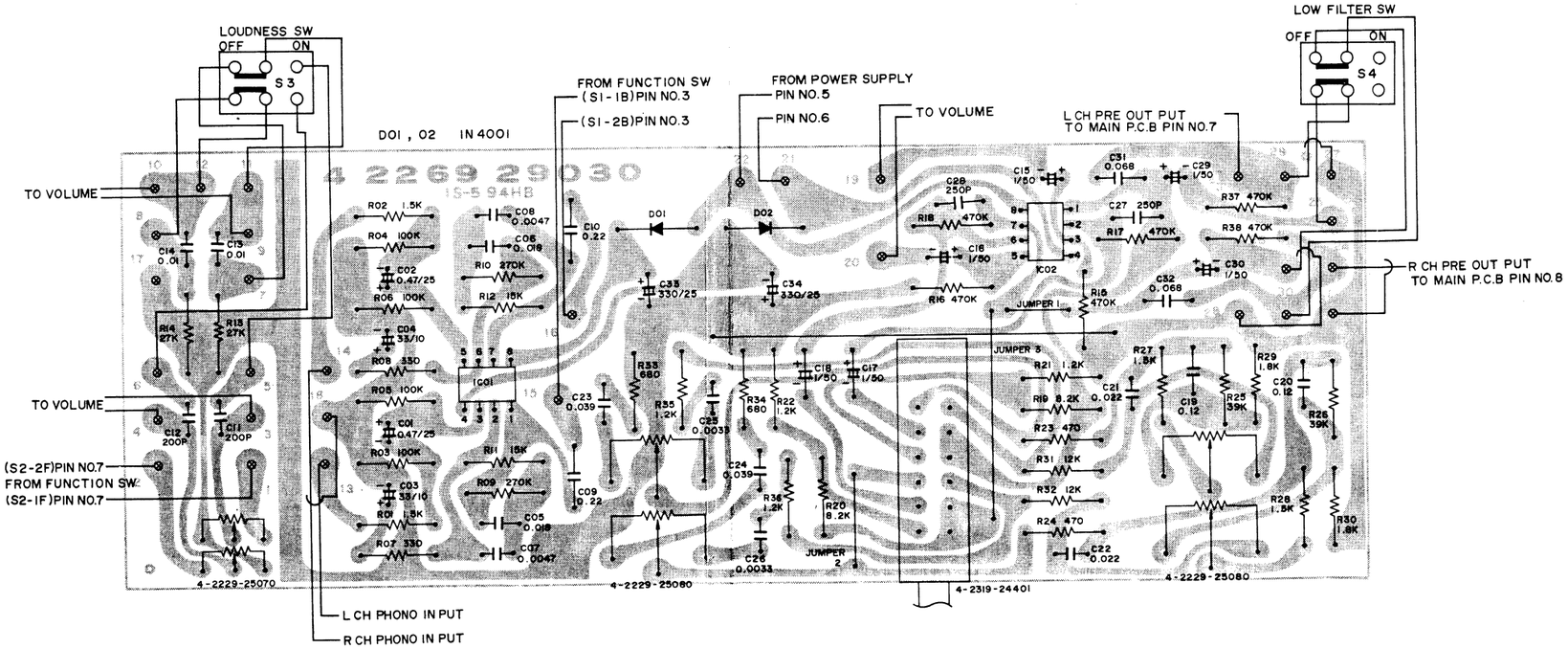
NOTES: 1. Part orders must contain Model Number. Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

EQ TONE AMP IC NJM 4558 SCHEMATIC/BLOK DIAGRAM





EQ AMP TONE SW P.C. BOARD



BOTTOM VIEW

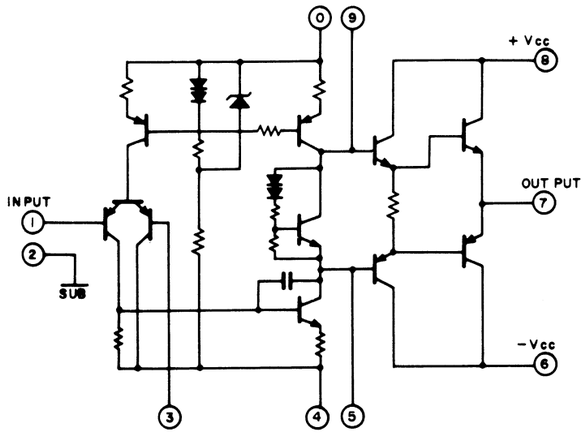
PARTS LIST

Key No.	Part No.	Description	Q'ty
	MAIN AMP/POWER SUPPLY PC ASSY		
31	131 0 4001 70401	Main Amp, Power Supply P.C Assy	1
	CAPACITORS		
C01,02	C1HCSK471SL	Ceramic 470pF 50V ±10%	2
C03,04	C1HRB-105A	Electrolytic 1μF 50V	3
C05,06	C1ARB-336A	Electrolytic 33μF 10V	2
C07,08	C1HCDJ120SL	Ceramic 12pF 50V	2
C09,10 11,12	C1HRB-107A	Electrolytic 100μF 50V	4
C13,14	C1HYSZ473A	Ceramic 0.047μF 50V +80 −20%	2
C15	C1ARB-227A	Electrolytic 220μF 10V	1
C16	C1HRE-106A	Electrolytic 10μF 50V	1
C17	C1HRB-106A	Electrolytic 10μF 50V	1
C18	C1HRB-105A	Electrolytic 1μF 50V	1
C19,20 21,22	C2HYSP103A	Ceramic 0.01μF 500V	4
	SEMICONDUCTORS		
D01,02 03,04	DMM-SR3AM - - - 4	SR3AM Diode	4
D05,06 07,08	205 5 9040 44210	DS-442	4
IC01,02	206 5 6881 00110	SS1001	2
Q01,02 03	203 5 5100 53650	2SC 536 E or F	3

Key No.	Part No.	Description	Q'ty
	RESISTORS		
R01,02	R2EDSJ272A	Carbon 2.7k 1/4W ±5%	2
R03,04	R2EDSJ104A	Carbon 100k 1/4W ±5%	2
R05,06	R2EDSJ563A	Carbon 56k 1/4W ±5%	2
R07,08	R2EDSJ272A	Carbon 2.7k 1/4W ±5%	2
R09,10 11,12	R2HZPK101A	Fuse 100 1/2W ±10%	4
R13,14	R2EDSJ563A	Carbon 56k 1/4W ±5%	2
R15,16	R3REPK0R5A	Cement 0.5 7W ±10%	2
R17,18	R3DXPK100A	Metal Oxside Film 10 2W ±10%	2
R19	R2EDSJ154A	Carbon 150k 1/4W ±5%	1
R20	R2EDSJ472A	Carbon 4.7k 1/4W ±5%	1
R21,22	R2EDSJ153A	Carbon 15k 1/4W ±5%	2
R23	R2EDSJ334A	Carbon 330k 1/4W ±5%	1
R24,25	R3DXPK122A	Metal Oxside Film 1.2k 2W ±10%	2
R26,27	R3DXPK821A	Metal Oxside Film 820 2W ±10%	2

NOTES:
1. Part orders must contain Model Number. Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

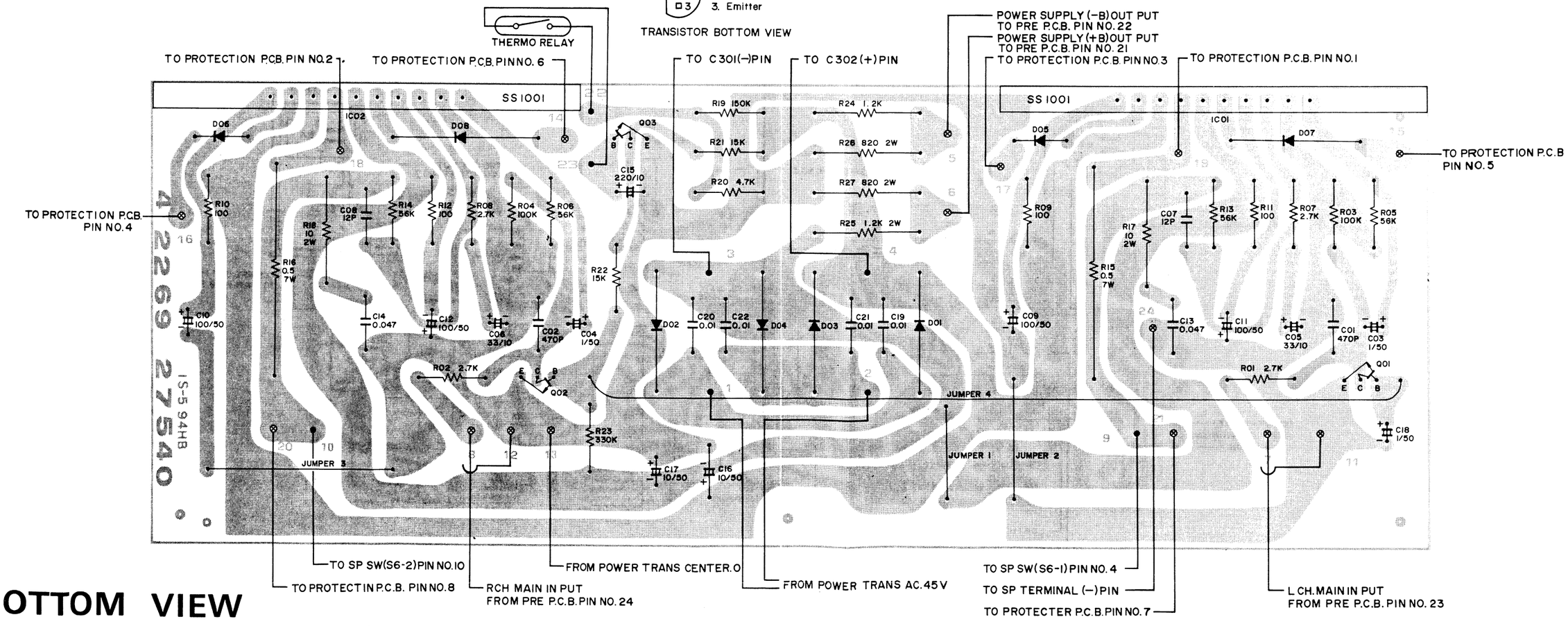
MAIN AMP IC SS1001 SCHEMATIC



MAIN AMP/POWER SUPPLY P.C. BOARD

Q01~03 2SC536 E,F
1. Base
2. Collector
3. Emitter
TRANSISTOR BOTTOM VIEW

D01~04 SR3AM-4
D05~08 DS-442



BOTTOM VIEW

EXPLANATION OF PROTECTIVE CIRCUITS

*For about two seconds after power switch is turned on, the speaker remains silent because the power muting circuit for prevention of shock noise operates during this time.

*If this unit is used under overloaded condition, for example, by being connected to speakers of 4Ω or under, or by being operated to work two pairs of speakers of 8Ω or under simultaneously, its power limiter is put into operation. If under this state you try to raise volume, the speakers may give distorted noise.

*If the speaker connecting terminals are short-circuited or the radiating holes at the cabinet top are kept closed during long operation, the internal temperature may rise abnormally. At about 80°C, the thermal sensor (temperature detection) circuit acts to break the signal circuits. If the cause is removed and the internal temperature lowers, the unit is automatically reset to restore normal operation.
The thermal sensor circuit also acts when the unit is used for many hours at high output in a place where room temperature is high, but this is not a trouble.

PARTS LIST

Key No.	Part No.	Description	Q'ty
	PROTECTION PC ASSY		
32	131 0 4001 70900	Protection PC Assy	1
	CAPACITORS		
C01,02 03,04	C1HFAK223A	Mylar 0.022μF 50V±10%	4
	RESISTORS		
R01,02 03,04	R2EDUJ101A	Carbon 100 1/4W±5%	4
R05,06 07,08 09,10	R2EDUJ102A	Carbon 1k 1/4W±5%	6

Key No.	Part No.	Description	Q'ty
	SEMICONDUCTORS		
D01,02 03,04 05,06 07,08 09,10 11,12	205 5 9040 44210	DS-442	12
Q01,02	203 5 6701 17550	2SC 1175E	2
03,04	203 5 6800 65950	2SA 659E	2

NOTES:
1. Part orders must contain Model Number. Part Number and Descriptio
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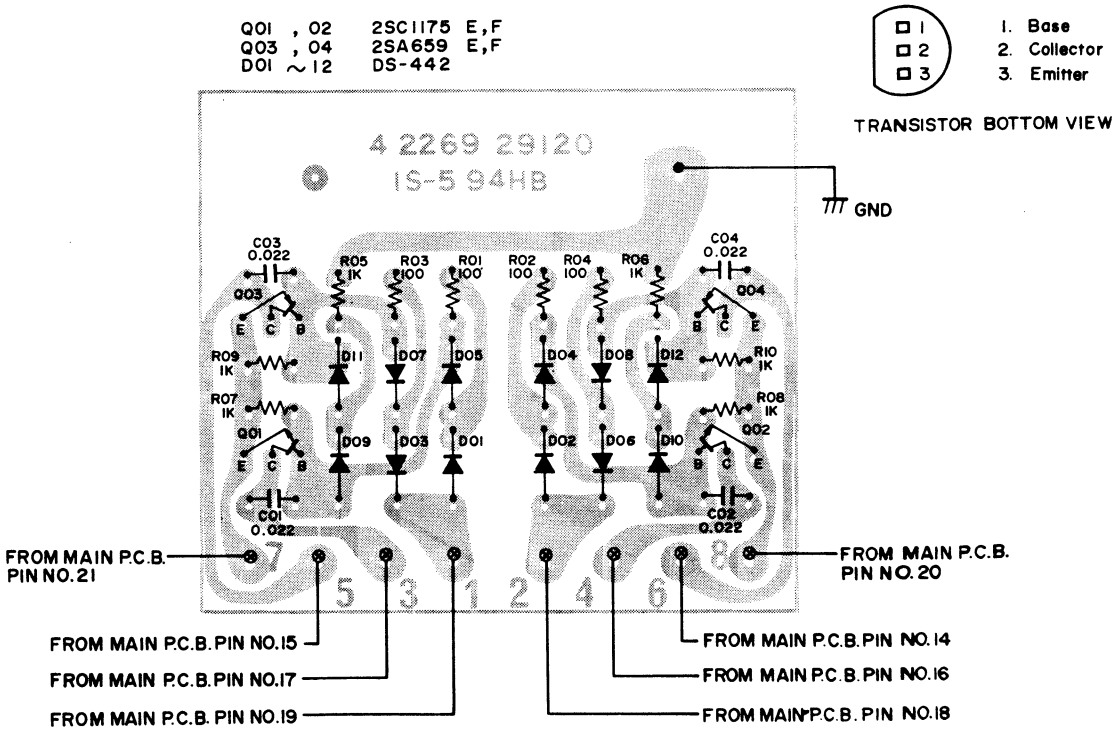
PROTECTION P.C. BOARD



BOTTOM VIEW

PARTS LIST

Key No.	Part No.	Description	Q'ty
	PACKING		
	131 6 1139 58005	Box Corrugate Exp	1
	131 6 2119 01440	Bag Polyethylene-Exp	1
	131 6 3009 20560	Pad	2
	ACCESSORIES		
	131 6 2719 10600	Bag Fan	1
	131 6 4119 54200	Explanatory Booklet	1
	131 6 4159 14700	Notes	1
	APPEARANCE/CHASSIS/ELECTRICAL PARTS		
1	131 2 1410 14500	Cover	1
2	131 2 1105 16300	Plate Bottom	1
3	131 2 1801 13200	Leg	4
10	131 2 1203 34001	Panel Control	1
11	131 2 1503 12201	Decorate Sign	1
12	131 2 1116 15000	Frame	4
13	131 0 1001 34600	Knob Assy	6
14	131 2 1601 38900	Knob	1
15	131 0 1001 34400	Knob Assy Volume	1
16	131 2 1601 39200	Knob Lever SW	4
17	131 2 4208 16400	Spacer	1
18	131 2 3701 17500	Mount electric Part	1
19	4 2359 21080	Jack Head Phone	1
20	131 2 6111 11601	Bushing	1
21	4 6129 20220	Pilot Lamp	1
22	131 2 3305 19700	Panel Front	1
23	131 2 3101 32000	Side Panel	2
24	131 2 3306 21402	Panel Rear	1

Key No.	Part No.	Description	Q'ty
25	131 2 6201 22500	Plate Heat Sink	1
26	131 2 6201 22200	Plate Heat Sink	1
27	4 2349 20891	Relay Thermal	1
28	4 2349 20911	Fuse 5A	1
	4 2349 20940	Fuse 3A	1
29	4 2359 21110	Fuse Holder	1
30	131 2 6107 19300	Plate Sever	2
31	131 0 4001 70400	Main, Power Supply PC Assy	1
32	131 0 4001 70900	Protection, PC Assy	1
33	131 0 4001 70300	EQ Amp Tone SW PC Assy	1
34	4 2319 24380	Power SW 2P	1
35	4 2319 24410	SP Selector	1
36	4 2319 24392	SW Lever 6P	2
37	4 2229 25260	Volume 250k	1
38	4 2319 24420	SW Rotary Function	1
39	4 2319 24430	SW Rotary Tape	1
40	4 2239 20940	Electrolytic 6800μF x 2 50V	1
41	4 2519 23552	Power Trans	1
42	4 2359 22000	Socket Phono 8P	1
43	4 2359 22020	Socket 6P	1
44	4 2359 21960	Socket AC Outlet	2
45	131 2 6111 14200	Bushing	1
46	4 2379 21470	Terminal 8P (SP)	1
47	4 2439 20391	Power Cord	1
48	4 2379 21650	Terminal 1P	1
49	131 2 3202 11900	Metal Reinf	1
50	4 2359 21221	Power Select Socket	1
51	4 2369 20550	Power Select Plug	1
52	131 2 1407 10400	Cover Decorate	1
53	4 2379 20140	Terminal Lug 2P	1
54	131 2 6108 11500	Cover Sever	1

NOTES: 1. Part orders must contain Model Number. Part Number and Description.
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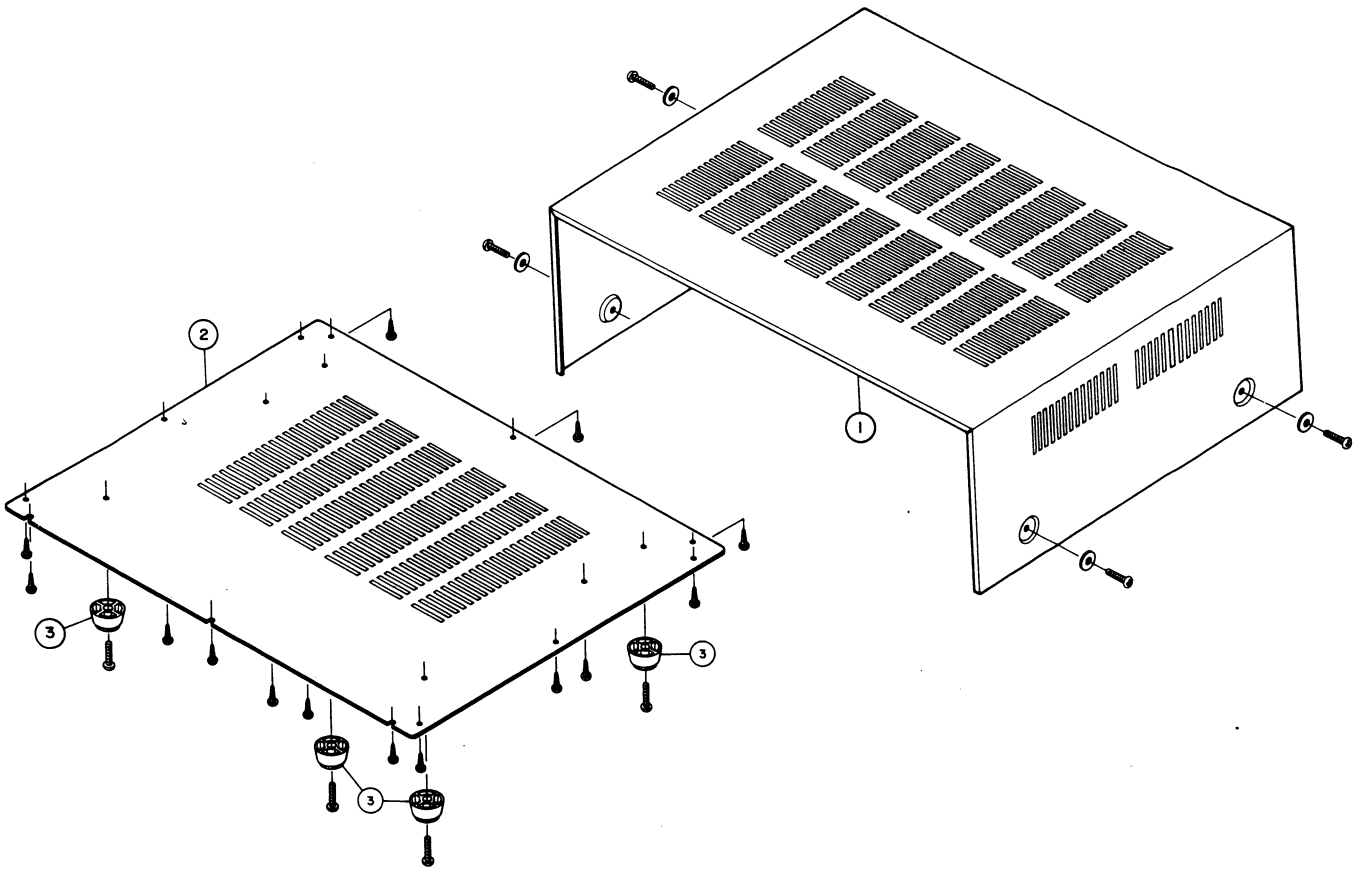
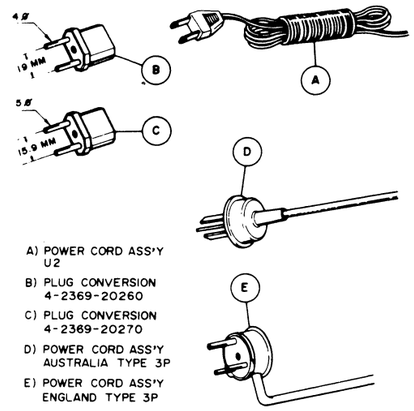
CABINET EXPLODED VIEW



STEREO AMPLIFIER EXPLODED VIEW

POWER CORD AND PLUG COMBINATION

1. A ONLY , 2. A+B , 3. A+C , 4. D ONLY , 5. E ONLY



A) POWER CORD ASS'Y U2

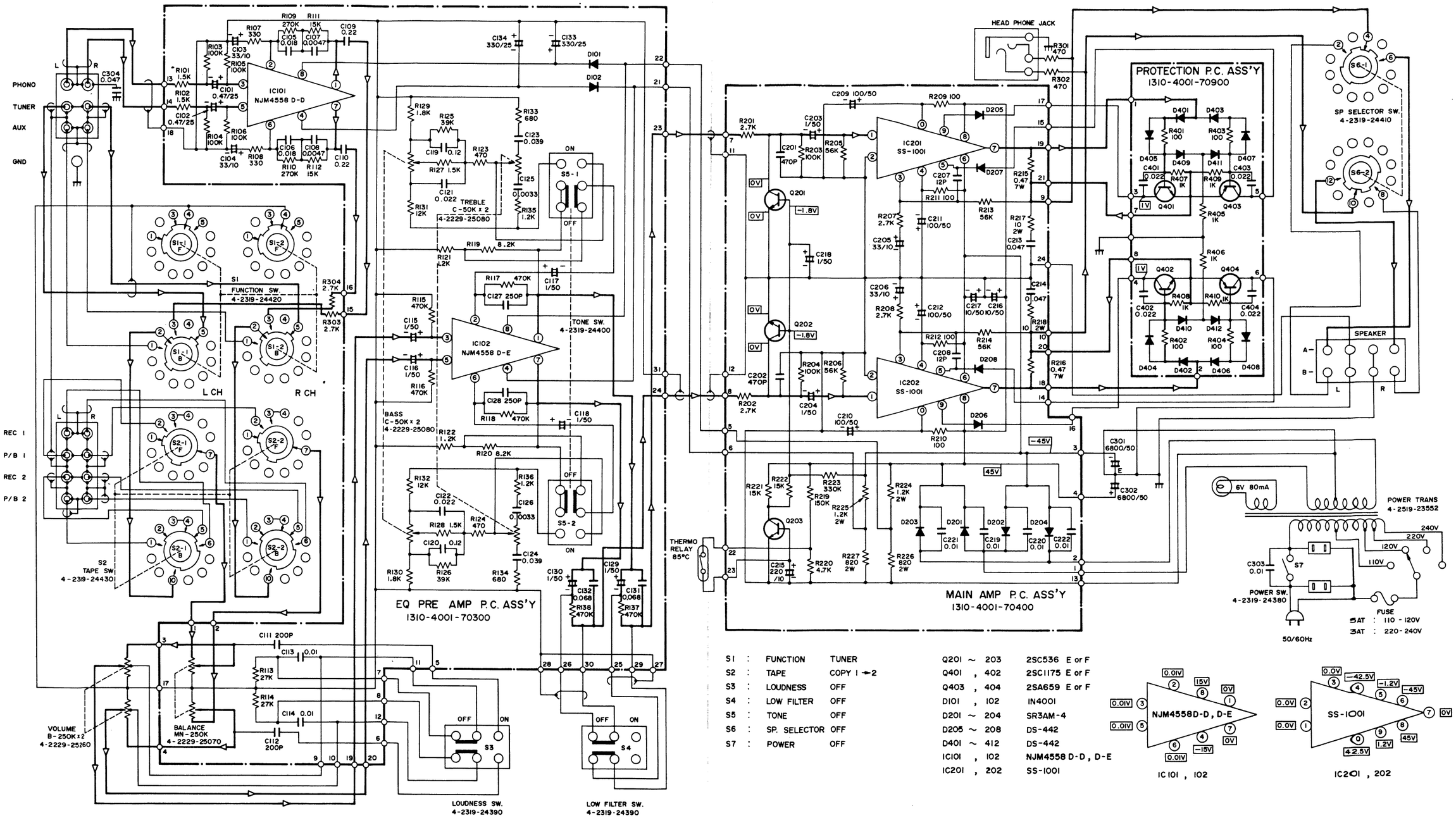
B) PLUG CONVERSION 4-2369-20260

C) PLUG CONVERSION 4-2369-20270

D) POWER CORD ASS'Y AUSTRALIA TYPE 3P

E) POWER CORD ASS'Y ENGLAND TYPE 3P

STEREO AMPLIFIER SCHEMATIC DIAGRAM



S1	: FUNCTION	TUNER	Q201 ~ 203	2SC536 E or F
S2	: TAPE	COPY 1 → 2	Q401 , 402	2SC1175 E or F
S3	: LOUDNESS	OFF	Q403 , 404	2SA659 E or F
S4	: LOW FILTER	OFF	D101 , 102	IN4001
S5	: TONE	OFF	D201 ~ 204	SR3AM-4
S6	: SP. SELECTOR	OFF	D205 ~ 208	DS-442
S7	: POWER	OFF	D401 ~ 412	DS-442
			IC101 , 102	NJM4558 D-D, D-E
			IC201 , 202	SS-1001

IC 101 , 102

IC201 , 202

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